

said gas turbine system comprises a gas turbine for performing expansion work using said combustible gas, wherein said gas turbine supplies exhaust gas to a heat recovery system;

said heat recovery system performs heat exchange, wherein said heat recovery system uses said exhaust gas supplied from said gas turbine as a heat source, and supplies steam generated in the heat exchange to a steam turbine system;

said steam turbine system performs expansion work, said steam turbine system comprising a condenser to condense said steam from said heat recovery system into water, said water being supplied to a heat exchanger in said coal gasification system, where said water is heated to steam, and wherein said steam from said heat exchanger is supplied to more than one high-temperature section of the gas turbine system which are at a temperature higher than a temperature of said steam from said heat exchanger.

2. (Twice Amended) An IGCC according to claim 1, wherein a higher-temperature steam is produced after cooling said more than one high-temperature section of the gas turbine system with said steam from said heat exchanger, said higher-temperature steam is recovered from said more than one high-temperature section of the gas turbine system and supplied to a steam turbine in said steam turbine system.

3. (Twice Amended) An IGCC according to claim 2, wherein said more than one high-temperature section of the gas turbine system is at least said gas turbine and a gas turbine combustor.

5. (Amended) An IGCC according to claim 4, wherein said coal supplying unit employs the nitrogen gas from said gasification substance producing unit.

6. (Amended) An IGCC according to claim 5, wherein the nitrogen gas produced in said gasification substance producing unit is supplied to said gas turbine combustor, the nitrogen gas combined therein with said combustible gas.

7. (Twice Amended) An IGCC according to claim 6, wherein said gas turbine system comprises an air compressor that supplies air to said at least one of said more than

one high-temperature section of the gas turbine system for the purpose of cooling said at least one of said more than one high-temperature section, producing a higher-temperature air, and wherein

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said higher-temperature air is recovered after cooling said at least one of said more than one high-temperature section and supplied to said heat recovery system.

9. (Twice Amended) An IGCC according to claim 5, further comprising:

a detector for detecting a calorific value of said combustible gas from said gas cleanup unit; and

a controller for controlling a flow rate of pressurized air from an air compressor, wherein said pressurized air is supplied to said gasification substance producing unit based on said calorific value.

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10. (Twice Amended) An IGCC according to claim 1, wherein a higher-temperature steam is produced after cooling said more than one high-temperature section of the gas turbine system with said steam from said heat exchanger, and wherein said higher-temperature steam is recovered from said more than one high-temperature section of the gas turbine system and supplied to said heat recovery system.

11. (Twice Amended) An IGCC according to claim 10, wherein said more than one high-temperature section of the gas turbine system is at least said gas turbine and a gas turbine combustor.

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13. (Amended) An IGCC according to claim 12, wherein said coal supplying unit uses the nitrogen gas from said gasification substance producing unit.

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14. (Twice Amended) An IGCC according to claim 10, wherein air generated in an air compressor in said gas turbine system is supplied to at least one of said more than one high-temperature section of the gas turbine system for the purpose of cooling said at least one of said more than one high-temperature section, producing a higher-temperature air, said higher-temperature air is recovered after cooling said at least one of said more than one high-temperature section and supplied to said heat recovery system.

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15. (Amended) An IGCC according to claim 10, wherein said higher-temperature steam is recovered from said more than one high-temperature section of the gas turbine system and supplied to said heat recovery system and to said steam turbine.

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Please add new claims as follows:

--33. An integrated coal gasification combined cycle power generator (IGCC) comprising:

a coal gasification system for producing a combustible gas from coal, wherein said gasification system supplies said combustible gas to a gas turbine system;

said gas turbine system comprises a gas turbine for performing expansion work using said combustible gas, wherein said gas turbine supplies exhaust gas to a heat recovery system;

said heat recovery system performs heat exchange, wherein said heat recovery system uses said exhaust gas supplied from said gas turbine as a heat source, and supplies steam generated in the heat exchange to a steam turbine system;

said steam turbine system performs expansion work, said steam turbine system comprising a condenser to condense said steam from said heat recovery system into water, said water being supplied to a heat exchanger in said coal gasification system, where said water is heated to steam, wherein said steam from said heat exchanger is supplied to at least one high-temperature section of the gas turbine system which is at a temperature higher than a temperature of said steam from said heat exchanger, and wherein high-pressure from an air compressor in said gas turbine system is supplied to cool the at least one high-temperature section of the gas turbine system if steam is not yet generated by said heat exchanger in said coal gasification system.

claim

34. An IGCC according to claim 33, wherein a higher-temperature steam is produced after cooling said at least one high-temperature section of the gas turbine system with said steam from said heat exchanger, said higher-temperature steam is recovered from said at least one high-temperature section of the gas turbine system and supplied to a steam turbine in said steam turbine system.

35. An IGCC according to claim 34, wherein said at least one high-temperature section of the gas turbine system is at least one of said gas turbine and a gas turbine combustor.

36. An IGCC according to claim 35, further comprising a gasification substance producing unit in said coal gasification system for producing an oxygen gas and a nitrogen gas from air, said gasification substance producing unit supplying said oxygen gas to a coal gasification unit in said coal gasification system, wherein:

 said coal gasification unit receives said oxygen gas from said gasification substance producing unit and receives coal from a coal supplying unit;

 said coal gasification unit burns the coal from said coal supplying unit with the oxygen gas from said gasification substance supplying unit, producing said combustible gas and introducing said combustible gas into a cooling unit in said coal gasification system;

 said cooling unit cools said combustible gas from said coal gasification unit, said cooling unit being in fluid connection with a gas cleanup unit in said coal gasification system; and

 said gas cleanup unit removes impurities from said combustible gas.

37. An IGCC according to claim 36, wherein said coal supplying unit employs nitrogen gas from said gasification substance producing unit.

38. An IGCC according to claim 37, wherein the nitrogen gas produced in said gasification substance producing unit is supplied to said gas turbine combustor, said nitrogen gas combined therein with said combustible gas.

39. An IGCC according to claim 38, wherein the air compressor in said gas turbine system supplies air to said at least one high temperature section of the gas turbine system for the purpose of cooling said at least one high-temperature section, producing a higher-temperature air, and wherein

 said higher-temperature air is recovered after cooling said at least one high-temperature section and supplied to said heat recovery system.

40. An IGCC according to claim 37, further comprising:
a detector for detecting a calorific value of said combustible gas from said gas cleanup unit; and
a controller for controlling a flow rate of said combustible gas based on said calorific value.

41. An IGCC according to claim 37, further comprising:
a detector for detecting a calorific value of said combustible gas from said gas cleanup unit; and
a controller for controlling the flow rate of pressurized air from an air compressor supplied to said gasification substance producing unit based on said calorific value.

42. An IGCC according to claim 33, wherein a higher-temperature steam is produced after cooling said at least one high-temperature section of the gas turbine system with said steam from said heat exchanger, and wherein
said higher-temperature steam is recovered from said at least one high-temperature section of the gas turbine system and supplied to said heat recovery system.

43. An IGCC according to claim 42, wherein said at least one high temperature section of the gas turbine system is at least one of said gas turbine and a gas turbine combustor.

44. An IGCC according to claim 43, comprising a gasification substance producing unit in said coal gasification system for producing an oxygen gas and a nitrogen gas from air, said gasification substance producing unit supplying said oxygen gas to a coal gasification unit in said coal gasification system, wherein
said coal gasification unit receives said oxygen gas from said gasification substance producing unit and receives coal from a coal supplying unit,
said coal gasification unit burns the coal from said coal supplying unit with the oxygen gas from said gasification substance supplying unit, producing said combustible gas and introducing said combustible gas into a cooling unit in said coal gasification system,

said cooling unit cools the combustible gas from said coal gasification unit, said cooling unit being in fluid connection with a gas cleanup unit in said coal gasification system, and

said gas cleanup unit removes impurities from said combustible gas.

45. An IGCC according to claim 44, wherein said coal supplying unit uses nitrogen gas from said gasification substance producing unit.

46. An IGCC according to claim 42, wherein air generated in an air compressor in said gas turbine system is supplied to said at least one high temperature section of the gas turbine system for the purpose of cooling said in said coal gasification system high-temperature section, producing a higher-temperature air, said higher-temperature air is recovered after cooling said in said coal gasification system high-temperature section and supplied to said heat recovery system.

47. An IGCC according to claim 42, wherein said higher-temperature steam is recovered from said high-temperature section of the gas turbine system and supplied to said heat recovery system and to said steam turbine.